SAR SCENE

The Canadian Search and Rescue Magazine Online

June 2008 Vol. 17, #1

Canadian ground SAR champion announced

406 MHz ELTs

Chiropractics to help responders' injuries

News in SAR prevention

Tragedy Spawns Heroes

Virtual SAR

Canadian Coast Guard Auxiliary's Marine SAR Simulator Program

Government of Canada
National Search and Rescue Secretariat

Gouvernement du Canada
Secrétariat national Recherche et sauvetage

Canada

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NOASARA purchases SAR aircraft

In February, Civil Air Search and Rescue Association (CASARA) member, the Northwestern Ontario Air Search and Rescue Association (NOASARA), purchased an aircraft which will be a dedicated resource to search and rescue (SAR) for Northwestern Ontario. The C-GQFZ a Cessna 17N aircraft is owned by NOASARA and stored at the Paterson Hangar in Thunder Bay, Ontario. The purchase was a year in the making and was made possible by the Ontario Trillium Foundation who gave $75,000 for the purchase. The Paterson Foundation and the John Andrews Foundation donated a total of $12,000 towards the acquisition.

Jason Hughes, President and Unit Director of NOASARA with NOASARA's new Cessna 17N

Photo Credit: *Stephen Hunsberger, Vice President, NOASARA*

"This purchase is important to us because it allows us to operate a dedicated SAR aircraft that will incorporate specialized equipment," says Jason Hughes, President and Unit Director of NOASARA. "We will be able to have a dedicated pool of CASARA pilots proficient in the use of the aircraft which will increase training and pilot currency. This will reduce issues like fatigue and pilot availability for a major search."

The aircraft will be leased to the Nor' Western Flying Club which will provide NOASARA with a steady stream of revenue to meet the high costs of aircraft maintenance as well as operating a dedicated SAR hangar in Thunder Bay, Ontario.

With added benefits like increased training, standards, currency and membership, having a dedicated SAR resource also means that NOASARA will be able to respond to distress calls from the Department of National Defence and the Ontario Provincial Police more effectively.

"The purchase of the aircraft has many benefits for us. It will make the question of aircraft availability for searches a thing of the past," says Mr. Hughes. ■

Canadian ground SAR Champion announced

By Jacqueline Bannach

On March 7, 2008 the Commissioner of the Royal Canadian Mounted Police (RCMP), William Elliott, announced that the RCMP would accept, in principle, the role of Ground Search and Rescue (GSAR) Champion. This is a significant achievement in a long-standing effort to establish a national focal point for the practice of GSAR across Canada.

While air and maritime SAR services are led nationally by the Canadian Forces and the Canadian Coast Guard, responsibility for persons missing or in distress on land or inland waters rests largely with the provinces and territories. These GSAR services are successfully delivered by provincial, territorial, and municipal police forces; volunteer teams; and emergency measures organizations.

As Canada's SAR Program has continued to mature, however, the need for a national focal point for GSAR – complementing in part the federal air and marine sectors — has become increasingly clear. In particular, the Search and Rescue Volunteer Association of Canada, the Ground Search and Rescue Council of Canada, the National Search and Rescue Secretariat, and the RCMP have all agreed that a central point for enhancing communication, collaboration, advocacy, and support would be of great benefit to the delivery of GSAR services across the country.

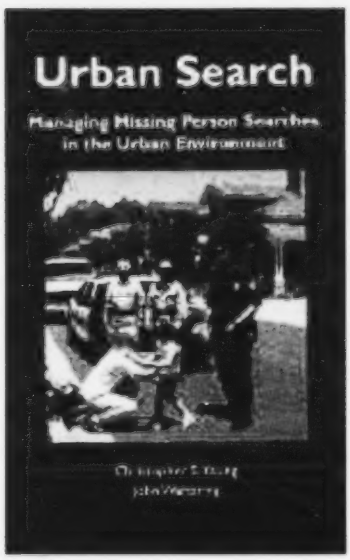
During the past year, these key entities formally endorsed the proposal that the RCMP take on the role of GSAR Champion. Indeed, as the contracted police service in eleven provinces and territories and several hundred municipalities across Canada, the RCMP is ideally situated and already engaged in this work. The Commissioner's announcement is therefore warmly welcomed by the GSAR community.

While it is a pivotal decision, the successful identification of the RCMP as GSAR Champion is the first step of many in creating this national focal point. Work will now continue to define what this championship constitutes, and the tangible forms it will take, particularly with respect to the volunteer community. Overall, it is hoped that the sustainability of GSAR services in Canada will be well-served by this enhanced national coordination and support, particularly as SAR program capacity continues to be built and enhanced by individual provincial/territorial governments. ■

New book on urban search available

Urban Search: Managing Missing Person Searches in the Urban Environment

Authors: Christopher S. Young and John Wehbring



A new resource for search managers has recently been published by dbS Productions. *Urban Search: Managing Missing Person Searches in the Urban Environment* is a comprehensive 337 page text that takes the reader through the stages of an urban search operation, from the initial report through to the conclusion. Not to be confused with heavy urban search and rescue, this book helps translate the principles of wilderness search management to the search for missing persons in urban areas. Additional information on pre-planning, missing person behaviour, and training for search managers rounds out this practical text.

Contact dbS Productions at 1-800-745-1562 or www.dbs-sar.com for more information on this book, including how to order. ■

Search for emergency beacon leads U.S. Civil Aviation Patrol to Houston poolside

Courtesy of Civil Air Patrol National Headquarters

Things are not always as they seem. On March 29, the U.S. Air Force Rescue Coordinator Center reported an emergency signal near Houston Intercontinental Airport, in Texas. Within two hours Capt. Bob Beeley and 1st Lt. John Clarke were en route to search for the source.

The search went until sunset without success. The following morning, Harris County sheriff's deputy and Delta squadron members set out again. After searching the area and seeing no boats or downed aircraft, they asked a neighborhood resident if he knew of anyone nearby who had a large craft.

A Houston resident holds the 121.5 MHz ELT that began transmitting when she threw it into her pool, catching the attention of the Air Force Rescue Coordination Center and a pair of Delta Composite Squadron searchers

Photo Credit: *John Clark, First Lieutenant, Delta Composite Squadron, Civil Air Patrol Texas Wing*

The man didn't but he suddenly remembered that his wife had recently obtained a number of nautical decorations for their yard. The woman had acquired two live 121.5 MHz Emergency Position Indicating Radio Beacons (EPIRBs) and had turned one on to see the cute light on top blink when she threw it in her pool. Although the light of this EPIRB didn't work, the transmitter did. Both devices were disarmed.

As individuals get rid of their older 121.5 MHz emergency beacons for newer 406 MHz models, it's crucial that the older units be disposed of safely and that the unit be decommissioned. You just never know. ■

April 28, 2008 - The Honourable Peter MacKay, Minister of National Defence, Minister of the Atlantic Canada Opportunities Agency (ACOA), and Lead Minister for Search and Rescue, with Captain Anthony Patterson, President and CEO of Virtual Maritime Technology (VMT). Capt. Patterson attended the announcement of ACOA's $8.5 million investment in the renewal of the Springboard Atlantic initiative which is designed to facilitate and accelerate the transfer of research and development from the post secondary institutions to the private sector. Minister MacKay had the opportunity to witness a small scale demonstration of VMT's simulator technology. The marine simulator was developed jointly by VMT, the Marine Institute of Memorial University and the Canadian Coast Guard Auxiliary, with funds from Search and Rescue New Initiatives Fund (SAR NIF).

Photo Credit: *Atlantic Canada Opportunities Agency*

German family rescued after using light from cell phone

In January, a family of four was rescued after getting lost in darkness while hiking in the snow near Immenstadt, Germany. After calling for help from the Bergrettung (Mountain Rescue), they were told to point their cell phone display light to the sky. Using night vision goggles, the helicopter crew spotted the tiny light from a distance of 2 kilometers and was able to rescue the family who had been stranded 1000 metres above the valley. ■

SAR fundraiser brings breakfast to local NB community

"It's the longest running campaign we have and it is extremely unique," boasts Kenn Hong, Search Manager of York Sunbury Search and Rescue (YSSR) in Fredericton, New Brunswick. He is referring to YSSR's annual pancake breakfast fundraiser – a successful event that is held every year in March during sugar bush weekend at Kings Landing. This year's fundraiser was held on March 29 and 30, a timely occurrence as March marked the 25th anniversary of ground SAR in New Brunswick.

Nestled in the St. John River valley, Kings Landing is a historical settlement depicting New Brunswick in the 1800s. This location offers a one of a kind setting for the annual YSSR fundraiser, an event that attracts members of the community from all walks of life.

As Mr. Hong notes, the donation of the facility and the volunteers are what make the event possible. "The diversity of participants is wonderful. We not only have SAR volunteers participate, but also community members who come and help cook and serve the food in the facility provided by Kings Landing. We get to see all the people who support and work with us as well as visitors to King's Landing who may not know SAR. It's great."

In addition to the proceeds from the pancake breakfast fundraiser, YSSR received a $1,200 donation from the Holiday Inn Fredericton *Friends in Need* program. "We hope that we will continue to benefit from successful fundraisers and generous contributions," says Mr. Hong. "It helps us and raises the profile of volunteer SAR in the community". ■

YSSR Pancake breakfast 2008

Photo Credit: *Marc Roussell*

People

Mr. Danny Coultis has retired from the Canadian Coast Guard after 41 years of service. Mr. Coultis served for 23 years as the Regional Supervisor, Maritime Search and Rescue at the Joint Rescue Coordination Centre in Trenton.

Jim McAllister has retired from his position as Director at the British Columbia Provincial Emergency Program (BC PEP). From his decades as a search and rescue (SAR) volunteer, to leading the Ground and Inland Water SAR program in various capacities with the BC PEP, his vision helped to shape BC's SAR system into an integrated, coordinated and layered response network. He has also brought his insights and enthusiasm to the national table through the Ground Search and Rescue Council of Canada, which he led as council chair from 2007-2008.

Vern Fraser has been appointed the chair of the Ground Search and Rescue Council of Canada replacing Jim McAllister.

Michael Templeton has replaced Erin Deacon as the Manager at the Yukon Emergency Management Office. Mr. Templeton will also be the Yukon representative on the Ground Search and Rescue Council of Canada.

Awards

BC ground SAR volunteer recognized

For her quick actions and coming to the aid of her climbing partner, Surrey Search and Rescue (SAR) member, Stacey Glanville, was awarded the Good Samaritan Award by the British Columbia Ambulance Service. The award was presented during a meeting of the British Columbia Search and Rescue Association (BCSARA) in January 2008.

The award recognizes Ms. Glanville's efforts in providing care for her friend and climbing partner, Ken Gallant, after he fell 60 feet from above her. Mr. Gallant, a part time paramedic as well as a long-time SAR volunteer, was eventually flown to a trauma centre where he received care.

In addition to the BC Ambulance Service Good Samaritan Award, Ms. Glanville was presented with a Certificate from the BCSARA. ■

Photo Credit: Neil Brewer, BCSARA and Kent Harrison Search and Rescue

SAR Techs awarded Medals of Bravery for northern rescue

On February 29 2008, two search and rescue technicians were presented with Decorations of Bravery by Her Excellency the Right Honourable Michaëlle Jean, Governor General of Canada during a ceremony at Rideau Hall. Master-Corporal Brian Decaire and Sergeant Darcy St-Laurent were honoured for the April 2005 rescue of a stranded civilian helicopter pilot in the Northwest Territories. When the mission was launched, most thought it would last a day but severe weather conditions stretched it to five.

On April 26, 2005, Master-Corporal Decaire and Sergeant St-Laurent parachuted from a Hercules aircraft during a blizzard to assist the aviator who was stranded west of Boland Lake, in the Northwest Territories. In total darkness, they performed a challenging night landing, farther away than projected from the downed helicopter. Despite being buffeted by the extremely high winds, the rescuers walked for an hour, carrying 50 kg of survival gear on their backs, until they reached the stranded pilot. In the most adverse weather conditions, victim and rescuers waited out the storm until they could be extracted from the site by military helicopter five days later. ■

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Contribution to SAR acknowledged in Newfoundland and Labrador

In December 2007, Malcolm "Max" Winters was invested into the Order of Newfoundland and Labrador at a ceremony at Government House in St. John's, Newfoundland.

Mr. Winters, a well-known leader in Happy Valley-Goose Bay, chaired the committee that established the Happy Valley-Goose Bay Ground Search and Rescue Project and participated on the Melville Hospital In-Service Committee. Over the past 40 years, Mr. Winters has devoted countless hours towards the improvement of his community.

Lieutenant Governor Edward Robert, Malcolm "Max" Winters and Premier Danny Williams

Photo Credit: *Don Lane, The Lane Gallery*

The Order of Newfoundland and Labrador recognizes individuals who have demonstrated excellence and achievement in any field of endeavour which benefits in an outstanding manner Newfoundland and Labrador and its residents. ■

PEP/AIR Lifetime Membership Award

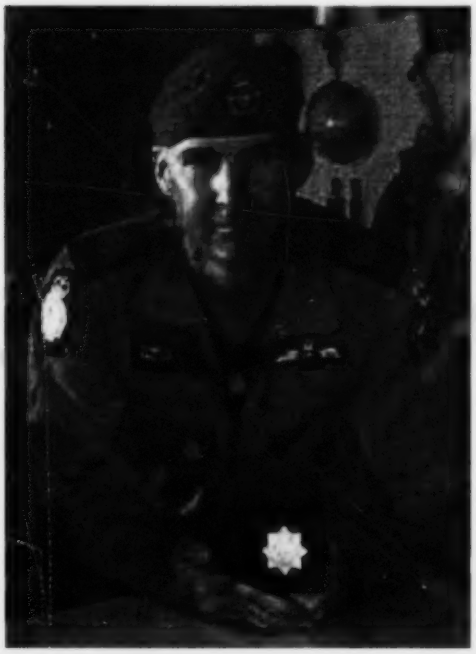
Roy Clemens, a volunteer with the Provincial Emergency Program Air Service in British Columbia, was presented with PEP/AIR's first Lifetime Membership Award. Charles Pachal, Provincial Director and Vic Schrauwen, Executive Member, presented Mr. Clemens with the award on March 15 2008, his 90th birthday. ■

SAR Tech receives award for Soldier On

Canadian Forces search and rescue (SAR) technician, Sergeant Andrew McLean, received the prestigious King Clancy Award from the Canadian Federation for Physically Disabled Persons on February 9 in Toronto. Sgt. McLean is a SAR Tech with the 424 Search and Rescue Squadron from 8 Wing Trenton.

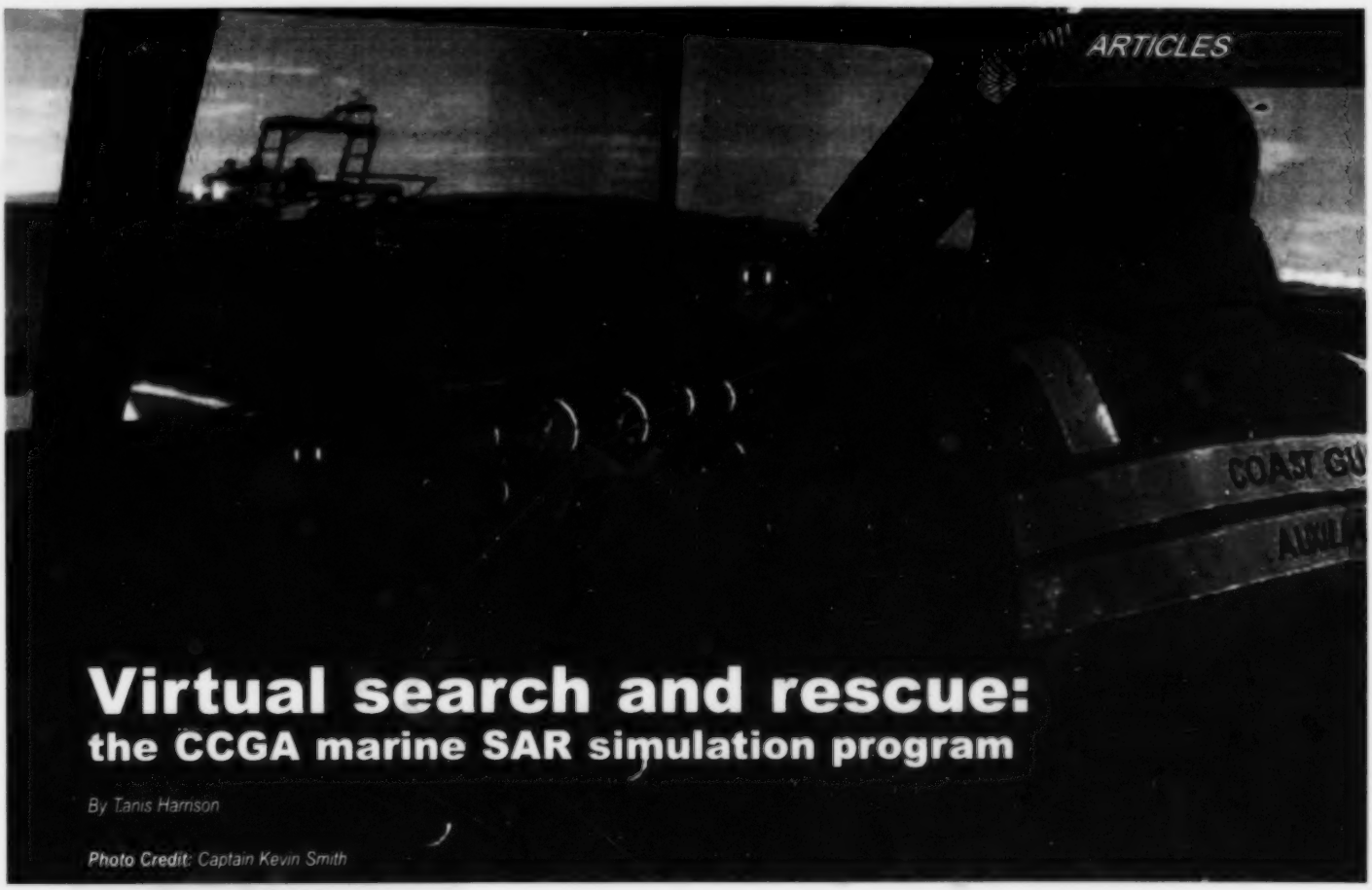
Sgt. McLean received the award for his dedication and commitment to helping Canadians through his involvement with the Soldier On program, a program that rehabilitates injured Canadian Forces members. An active spokesperson, Sgt. McLean has raised public awareness for the program through media interviews and fundraising initiatives.

The King Clancy Award is presented to distinguished Canadians who have made significant contributions in assisting disabled citizens to achieve a more rewarding lifestyle. It recognizes individuals whose outstanding accomplishments have helped to increase public awareness about the potential of disabled people. The award is named after former Toronto Maple Leafs' icon King Clancy, a well-known humanitarian. ■



Sgt. Andrew McLean holds his former Army beret at the SAR Tech equipment shop at 8 Wing Trenton

Photo Credit: *8 Wing Imaging, Department of National Defence*



Virtual search and rescue:
the CCGA marine SAR simulation program

By Tanis Harrison

Photo Credit: Captain Kevin Smith

It's 03:00 in the morning, and steady rain and gale force winds are pounding Vancouver Island's south coast. The Canadian Coast Guard Auxiliary – Pacific (CCGA-P) coxswain and crew are paged a code 3 Mayday to respond to reports of a sinking fishing vessel in the Strait of Juan de Fuca. The volunteer crewmembers race into the cabin of their fast rescue craft. They set a plan, start up the engines, and guide their vessel out into the night. Heavy rain and reduced visibility conditions require the navigator to focus intensely on the vessel's radar, chart plotter, and GPS as the crew speed through the night to the vessel's last known position. The helmsman maintains control of the rescue craft while scanning for logs, the vessel, and people who may be in the water. The third crewmember desperately tries to make contact with the crew of the stricken vessel while communicating with another search and rescue (SAR) vessel en route.

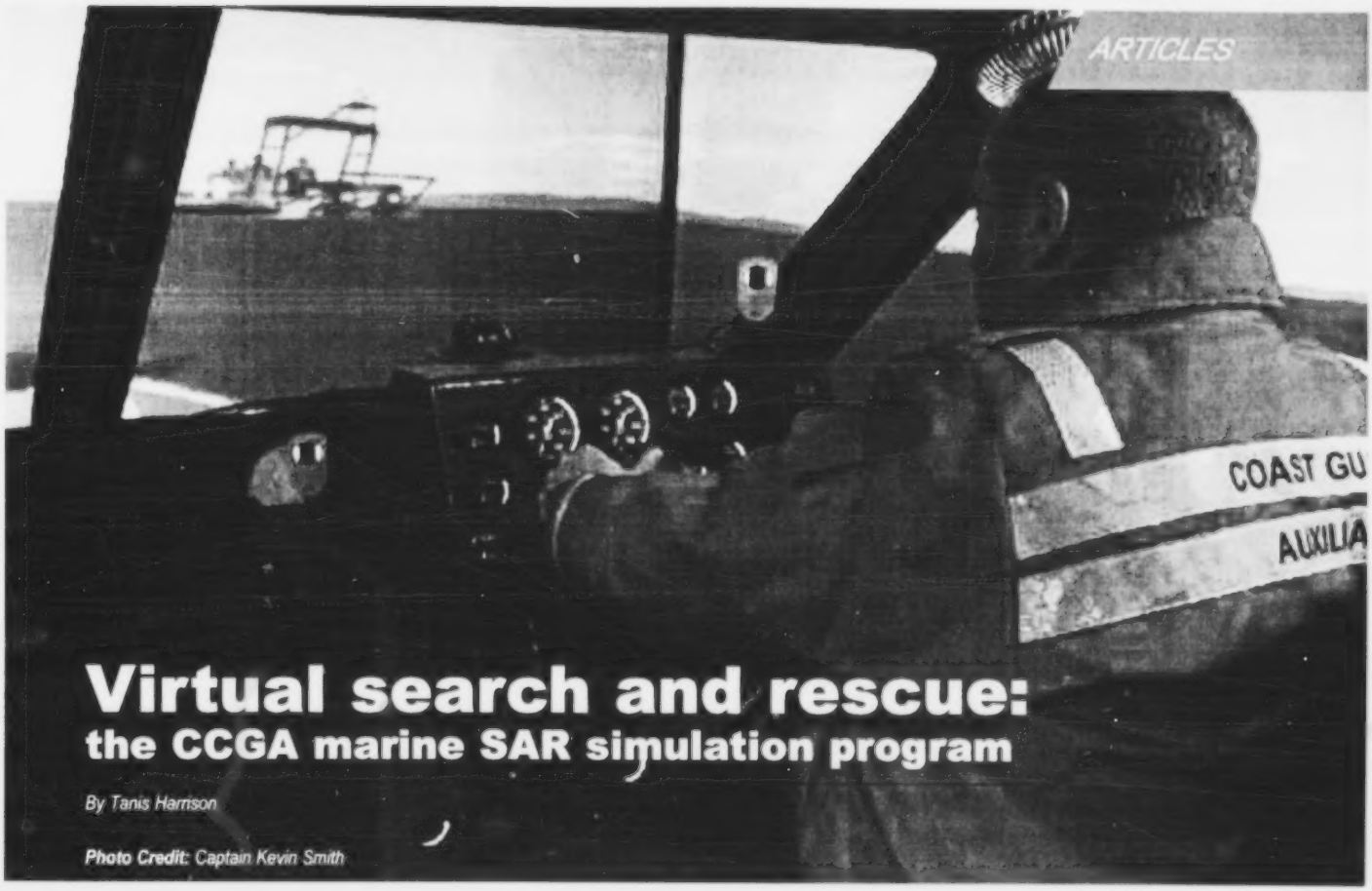
At 03:18, the stricken vessel is spotted on radar, and minutes later crew members get a visual off the starboard side – the vessel is quickly filling up with water and is listing to port. Two crewmembers on the vessel in distress are frantically calling out for help, and another is spotted in the water, arms flailing in the air desperate for rescue. The rescue craft maneuvers into position and the crew prepares to help the victims aboard. Seconds later, the lights come up and the screens go white – another successful simulation has been completed.

The rescue that just took place in the waters off Victoria was actually an immersive marine SAR simulation designed to provide realistic, safe, and effective training to marine SAR crews in high speed rescue craft. The CCGA-P, a volunteer marine SAR organization, has spent the past three years developing its simulator program. The program combines cutting edge technology with years of first-hand marine SAR knowledge to create a realistic and powerful training tool for its volunteer crewmembers.

The idea for the CCGA-P's simulator program first emerged in 2003 when the organization began looking for more efficient, cost effective, and safer ways to train marine SAR crews on fast response craft.

"A number of the CCGA-P's 50 community-based units had recently purchased high-speed search and rescue craft in order to provide 24-hour marine SAR services," said CCGA-P President Bruce Falkins. "With the use of larger and faster vessels, which often operate in adverse conditions, the need for modern and aggressive training approaches has grown with the increasing risk level." Many hours of research determined that simulation would be one of the best ways for the organization to address these new training needs.

In 2003, the CCGA-P submitted a SAR New Initiatives Fund (SAR NIF) proposal to the National Search and Rescue Secretariat and



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were granted the funds to develop the world's first accurate simulator for fast response craft. Development began in 2004 and by 2007, the CCGA-P's simulator was up and running. This was due in no small part to partnerships with Memorial University, the Canadian Coast Guard, Titan Inflatables, and CMC Electronics.

The CCGA-P simulator that has emerged from these partnerships is completely immersive and includes an accurate mathematical modeling of vessel motion. It contains a mock-up of an actual fast response craft cabin, complete with real vessel controls and equipment which makes for a truly realistic experience. Detailed graphical models of the vessel and target vessels operate in a representation of either the Victoria to Sidney, Douglas Channel or Broken Islands ocean environment, and include accurate depths, buoys, lights, and charted information. A 270° wrap around projection system displays the environment with parameters that are controlled by the instructor. To complete the experience, a 5-speaker sound system provides simulated engine and environmental noise.

In conjunction with the development of the CCGA-P's fully immersive simulator, an online navigation program called Navigation Equipment Training Simulator (NETsim) was created. While the full simulator requires a trip to Victoria, the NETsim can be accessed by anyone with a computer and a high-speed Internet connection. Thus, the NETsim provides navigation training to a larger audience.

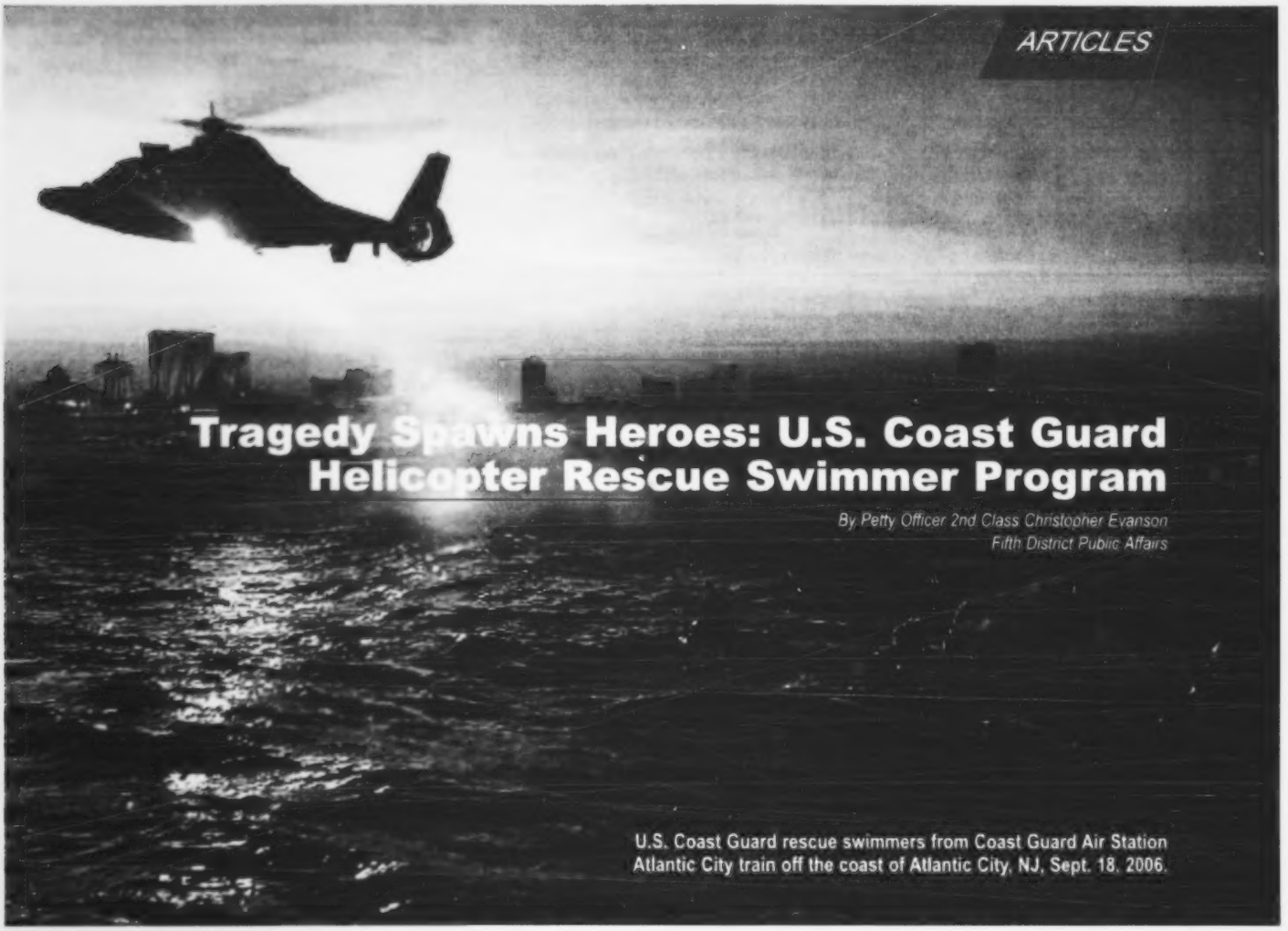
The NETsim is a virtual simulator that has the standard marine navigational equipment used on most rescue crafts. It is a key component of the CCGA-P's SAR Learning System, a comprehensive online training tool that allows CCGA-P members to gain marine navigation knowledge and to practice skills in a virtual environment. Other online components that complement the NETsim are interactive video tutorials, workbook exercises, a nautical library, and on-line evaluations. While CCGA-P crews still engage in on-water training, the SAR Learning System serves as an accessible and cost-effective supplement.

The first official full immersion simulator training course took place in Victoria this past winter. Six CCGA-P volunteer crewmembers were immersed for five days in simulated and on-water exercises that focused on complex skill interactions in crew communications, navigation and pilotage. Thanks to a dedicated team of volunteers, strong partnerships and the power of emerging technology, the simulator promises to serve as an outstanding training tool for many years to come.

For more information on the CCGA-P's simulation program, please contact Simulator Project Officer Thomas Kerr at (250) 480-2736. A Virtual Tour of the simulator is now availble at www.smallvesselsimulation.com. ■

Tanis Harrison is the Special Projects Officer for the Canadian Coast Guard Auxiliary – Pacific, and provides support to the organization's 1400 volunteer members.

Photo Credit: *Captain Kevin Smith*



Tragedy Spawns Heroes: U.S. Coast Guard Helicopter Rescue Swimmer Program

By Petty Officer 2nd Class Christopher Evanson
Fifth District Public Affairs

U.S. Coast Guard rescue swimmers from Coast Guard Air Station Atlantic City train off the coast of Atlantic City, NJ, Sept. 18, 2006.

Photo Credit: Tom Sperdulo, US Coast Guard

25 years ago, a tragic event claimed the lives of 31 Merchant Marines, and the U.S Coast Guard Helicopter Rescue Swimmer Program was conceived to prevent such disasters from happening again. The program has been a guardian angel to many souls nearly taken by the sea.

Tragedy at Sea

The S.S. Marine Electric, a 587-foot motor vessel transporting coal departed Norfolk, Va., for Brayton Point, Mass., on Feb. 10, 1983. Thirty-four merchant mariners were aboard as a winter storm pummeled the lower Chesapeake Bay. If four-foot seas within the bay were harsh, the seas awaiting the Marine Electric in the open ocean were in excess of 40 feet.

On Feb. 12, 1983, at approximately 2:51 a.m., a U.S. Coast Guard watch stander in Ocean City, Md., was notified by the Master of the Marine Electric, reporting his vessel was taking on water near the front end of the ship. By 3 a.m., the entire crew was mustered on deck near the starboard lifeboats preparing to abandon ship. At a 4:15 a.m., as the merchant mariners were preparing the lifeboats, the ship was struck by a powerful jolt, possibly a rogue wave, capsizing the vessel to the starboard side. The Marine Electric crew was thrown into the frigid Atlantic waters recorded at 37 degrees Fahrenheit (2.8 degrees Celsius) approximately 30 miles (48.3 kilometres) off the coast of Chincoteague. What was an initial distress call now became a massive search and rescue mission, but the following events proved far more difficult than ever imagined.

At the time, U.S. Coast Guard flight crews did not have the ability or power to deploy rescue swimmers in the sea to recover victims. A crewmember simply lowered a rescue basket from the helicopter in the vicinity of a distressed person in the water. The success of the mission relied almost entirely on the victim mustering the strength to get in the basket on his or her own. In cold temperatures where shock and hypothermia were prevalent, this practice proved futile.

were granted the funds to develop the world's first accurate simulator for fast response craft. Development began in 2004 and by 2007, the CCGA-P's simulator was up and running. This was due in no small part to partnerships with Memorial University, the Canadian Coast Guard, Titan Inflatables, and CMC Electronics.

The CCGA-P simulator that has emerged from these partnerships is completely immersive and includes an accurate mathematical modeling of vessel motion. It contains a mock-up of an actual fast response craft cabin, complete with real vessel controls and equipment which makes for a truly realistic experience. Detailed graphical models of the vessel and target vessels operate in a representation of either the Victoria to Sidney, Douglas Channel or Broken Islands ocean environment, and include accurate depths, buoys, lights, and charted information. A 270° wrap around projection system displays the environment with parameters that are controlled by the instructor.

To complete the experience, a 5-speaker sound system provides simulated engine and environmental noise.

In conjunction with the development of the CCGA-P's fully immersive simulator, an online navigation program called Navigation Equipment Training Simulator (NETsim) was created. While the full simulator requires a trip to Victoria, the NETsim can be accessed by anyone with a computer and a high-speed Internet connection. Thus, the NETsim provides navigation training to a larger audience.

The NETsim is a virtual simulator that has the standard marine navigational equipment used on most rescue crafts. It is a key component of the CCGA-P's SAR Learning System, a comprehensive online training tool that allows CCGA-P members to gain marine navigation knowledge and to practice skills in a virtual environment. Other online components that complement the NETsim are interactive video tutorials, workbook exercises, a nautical library, and on-line evaluations.

While CCGA-P crews still engage in on-water training, the SAR Learning System serves as an accessible and cost-effective supplement.

The first official full immersion simulator training course took place in Victoria this past winter. Six CCGA-P volunteer crewmembers were immersed for five days in simulated and on-water exercises that focused on complex skill interactions in crew communications, navigation and pilotage. Thanks to a dedicated team of volunteers, strong partnerships and the power of emerging technology, the simulator promises to serve as an outstanding training tool for many years to come.

For more information on the CCGA-P's simulation program, please contact Simulator Project Officer Thomas Kerr at (250) 480-2736. A Virtual Tour of the simulator is now availble at www.smallvesselsimulation.com. ■

Tanis Harrison is the Special Projects Officer for the Canadian Coast Guard Auxiliary – Pacific, and provides support to the organization's 1400 volunteer members.

Photo Credit: *Captain Kevin Smith*

Tragedy, Heroes: U.S. Coast Guard Helicopter Rescue Swimmer Program

By Petty Officer 2nd Class Christopher Evanson
Fifth District Public Affairs

U.S. Coast Guard rescue swimmers from Coast Guard Air Station Atlantic City train off the coast of Atlantic City, N.J., Sept. 18, 2006.

Photo Credit: Tom Sperdulo, US Coast Guard

25 years ago, a tragic event claimed the lives of 31 Merchant Marines, and the U.S Coast Guard Helicopter Rescue Swimmer Program was conceived to prevent such disasters from happening again. The program has been a guardian angel to many souls nearly taken by the sea.

Tragedy at Sea

The S.S. Marine Electric, a 587-foot motor vessel transporting coal departed Norfolk, Va., for Brayton Point, Mass., on Feb. 10, 1983. Thirty-four merchant mariners were aboard as a winter storm pummeled the lower Chesapeake Bay. If four-foot seas within the bay were harsh, the seas awaiting the Marine Electric in the open ocean were in excess of 40 feet.

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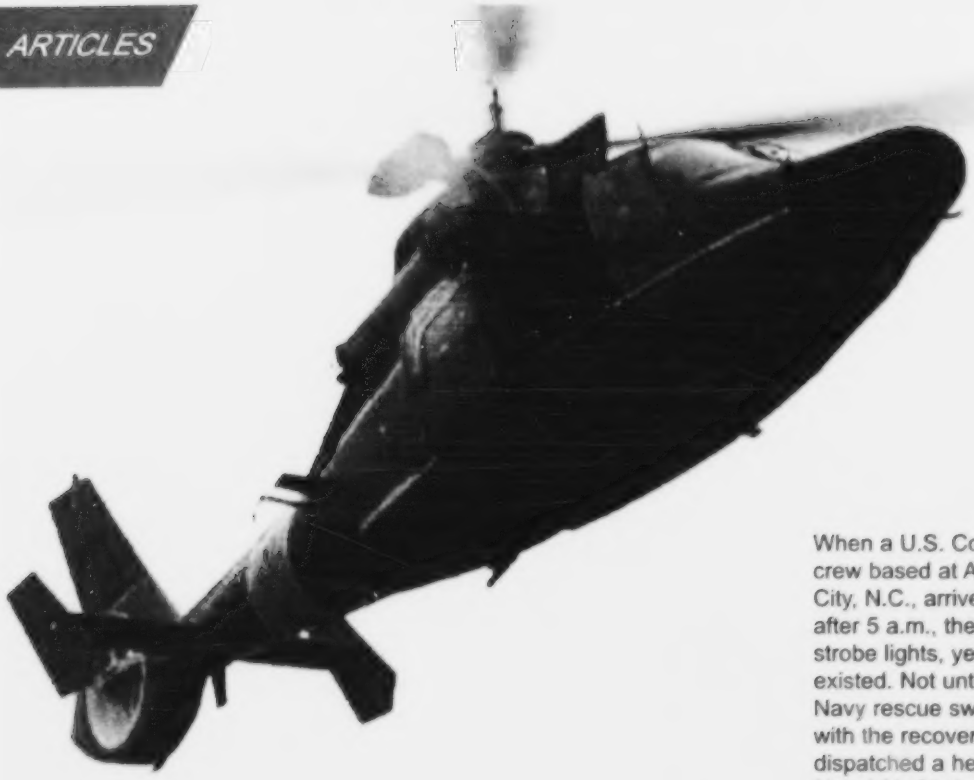

When a U.S. Coast Guard helicopter crew based at Air Station Elizabeth City, N.C., arrived on-scene shortly after 5 a.m., the water was flush with strobe lights, yet little sign of life existed. Not until 6:05 a.m. was a Navy rescue swimmer able to assist with the recovery. The Navy dispatched a helicopter crew from Naval Air Station Oceana in Virginia Beach, Va., which had rescue swimmers trained for search and rescue. One-by-one with the help of the crew of the 82-foot Coast Guard Cutter Point Highland, the Navy rescue swimmer recovered the bodies of the Marine Electric crew from the surface; nearly three hours after the vessel capsized.

Of the 34 crewmembers aboard the Marine Electric, 27 people were recovered; only three survived. Seven Marine Electric crewmembers were never found, possibly still aboard the ship. The medical examiners indicated that the cause of death of the deceased was hypothermia and/or drowning.

Coast Guard Petty Officer 1st Class Tony Ariola, a helicopter rescue swimmer from Air Station Savannah, hones his skills in Charleston Harbor, S.C., during a training mission. The crew of the U.S Coast Guard rescue helicopter was on their way to Air Station Savannah's northern staging area - Air Facility Charleston.

***Photo Credit:** U.S. Coast Guard photo by PA1 Donnie Brzuska, PADET Jacksonville, Fla.*

Aftermath

This tragic event proved to be more catastrophic because the U.S. Coast Guard was not prepared to respond. The sad conclusion of the S.S. Marine Electric served as a humbling blow to U.S Coast Guard readiness. Following the tragedy, the U.S. Coast Guard launched one of the biggest Marine Board of Investigations in its history. Making the case more overwhelming were Congressional representatives seeking to know how such a disaster could happen, and more importantly how can a similar scenario be averted. After several Congressional hearings, the Coast Guard Authorization Act of 1984 was passed to ensure the U.S Coast Guard was properly equipped to respond to such cases.

Introduction of the Guardian

"The Aviation Survival Technician (AST) rating's job which was created in 1969 has always been to inspect and maintain life support equipment, perform ground handling and servicing of aircraft, and conduct aviation administration duties," said Master Chief Petty Officer Donald Murray, Coast Guard Aviation Survival Technician Rating Force Manager.

The U.S. Coast Guard Helicopter Rescue Swimmer Program would become an extension of the AST mission objective, beginning very subtly in the fall of 1984, as a result of the Marine Electric tragedy. The U.S. Coast Guard joined forces with the Navy, which permitted prospective U.S. Coast Guard helicopter rescue swimmers to train with fellow Navy swimmers at the U. S. Navy Rescue Swimmer School at Naval Air Station Pensacola, Fla.

After a few years of training with the Navy, it became apparent the U.S. Coast Guard needed to make modifications because some of the methods taught at the Joint Service School were not applicable to the U.S. Coast Guard's search and rescue mission. The U.S. Coast Guard's main emphasis is peacetime rescues, not downed military recovery methods. In addition, the program was not without its challenges. The new feature to U.S. Coast Guard aviation generated hesitation and concern from pilots with regard to deploying swimmers in hazardous conditions.

Rescue swimmers assigned to Air Station Elizabeth City officially became the first operational unit with helicopter rescue swimmers March 5, 1985, with air stations throughout the country following suit throughout the following years. "The Coast Guard went fully operational with the rescue swimmer program in October of 1991 meaning all Aviation Survivalmen, [first class petty officer] and below stood rescue swimmer duty at every Coast Guard air station across the country," said Murray.

Since its inception, the U.S. Coast Guard Helicopter Rescue Swimmer program has enhanced the U.S. Coast Guard search and rescue mission. "The addition of a Rescue Swimmer asset to Helicopter search and rescue teams has had significant impact on the mission. Hurricane Katrina is our most recent reminder of the value of this asset," said Senior Chief Petty Officer Lewis Hart, who supervises the Aviation Survival Technician "A" school in Elizabeth City.

In the two-plus decades of the program's existence, several innovations in training have allowed rescue swimmers to adapt to the unpredictable situations that they often encounter.

"The Rescue Swimmer Program has evolved in a number of ways but mostly in more advanced gear and training. The development of the Advanced Helicopter Rescue School in Astoria, Ore., helps train AST's in advanced techniques such as vertical surface rescue, sea cave rescue, heavy surf rescue, and swift water rescue," said Hart. In addition, innovations in sport science became an objective in training rescue swimmers.

It has been 25 years since 31 souls from the Marine Electric perished. Since this tragedy, it can be said that many lives have been indirectly saved. It is sometimes through tragedy that good can be extracted, and the U.S. Coast Guard Rescue Swimmer has fostered this. In Hurricane Katrina, more than three-thousand lives were saved as the search and rescue operation unfolded on live television. In addition to survival skills in extreme elements, rescue swimmers are trained emergency medical technicians employing basic skills to victims while transporting to medical facilities ashore.

With lessons learned, the U.S. Coast Guard stands by for the next search and rescue case, always ready. ■

Petty Officer 2nd Class Christopher Evanson is a six-year veteran of the United States Coast Guard and currently resides in Portsmouth, Va. He was born and raised in Los Angeles, Calif., and serves the Coast Guard as a journalist, photographer and spokesperson.

Planning underway for SARSCENE 2008

On the heels of last year's conference in Victoria, British Columbia and for the second time in its history, SAR*SCENE* will be held in St John's, Newfoundland and Labrador. SAR*SCENE* 2008 will take place from October 15 to 18, 2008 and will be co-hosted by the Newfoundland and Labrador Search and Rescue Association (NLSARA), and the Department of Justice, Newfoundland and Labrador.

Harry Blackmore, President of SARVAC and NLSARA, promises a unique Newfoundland experience for all SAR*SCENE* participants. Many activities are planned to give conference delegates the opportunity to see the sights, including an outing on George Street.

JRCC Trenton at SARSCENE Exhibit Hall 2006

This year's conference theme, *Strengthening Partnerships*, highlights the importance of building and strengthening relationships between the agencies, organizations and individuals that have a role in search and rescue (SAR) response, support or prevention.

Sureté du Québec Team during the SARSCENE Games 2006

The program for 2008 will include returning speakers as well as many new presentations to complement the theme of partnerships. To suggest a presentation, discussion, panel or training session, and for all related inquiries, call 1-800-727-9414 or e-mail sarscene@nss.gc.ca.

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By Stephane Bachand

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Coquitlam SAR during SARSCENE Games 2007

SARSCENE Exhibit Hall

An important component of the conference is the Exhibit Hall where exhibitors showcase their products and services to the SAR community. If you're interested in having a booth at the conference, please visit the SAR*SCENE* 2008 website at www.nss.gc.ca for more information.

Public Safety at SARSCENE Exhibit Hall 2006

SARSCENE Games

Rain or shine, the 2008 SAR*SCENE* games will take place on Wednesday, October 15 at the Rotary Sunshine Park in St. John's, Newfoundland. With the large number of teams in the province, competition is expected to be fierce.

The SAR*SCENE* Games is intended to showcase ground SAR, and promote the sharing of skills in a friendly yet competitive environment. The Games typically bring together participants from across Canada, and often internationally. The one-day event consists of a series of six SAR-related challenges that demand cooperation, knowledge and quick thinking by teams of four.

There is no registration fee for participants. For more information or to register a team, please contact Carole Smith by telephone at (613) 996-3727 or 1-800-727-9414, by fax at 613-996-3746, or via e-mail at csmith@nss.gc.ca. SAR*SCENE* Games Registration Form is available on the SAR*SCENE* 2008 website at www.nss.gc.ca. ■

Stephane Bachand is a Communications Officer at the National Search and Rescue Secretariat.

Delegate registration forms, and information on hotels, schedules and travel, are available online. Check the SARSCENE 2008 website regularly for more updates at www.nss.gc.ca

Emergency beacons
406 MHz ELTs

By Larry Anglisano, Avionics Editor of Aviation Consumer magazine

SARSCENE Editor's note

While this 2007 article originates from the United States and references US pricing and legislation, it may be of interest to aircraft owners considering an upgrade to a 406 MHz ELT. As with any equipment purchase, however, those looking to buy a 406 MHz ELT should carry out their own research on 2008 approved models and prices before making a decision. Transport Canada is currently engaged in a regulatory process to amend existing ELT legislation. For more information, please consult Transport Canada's website at www.tc.gc.ca.

Article first published in Aviation Consumer *in April 2007.*
Reprinted with permission from the Aviation Consumer.

Emergency locator transmitters are the least fun-to-buy avionics, second maybe to transponders. Mechanics and avionics shops regard the ELT system as a nuisance to maintain, while owners cringe at spending money on ELT repairs and maintenance.

We felt the same until we found ourselves roaming around a dense cornfield one night while our airplane lay smashed on its back after suffering an engine failure. As rescue aircraft homed in on our activated ELT signal, we had a change of heart, realizing that ELTs serve a valuable purpose.

If you've ignored the ELT market lately, you'll be surprised to find that ELTs have become pricey with the planned 2009 termination of the 121.5 MHz beacon satellite support. Moreover, if, by February 1, 2009, your aircraft still has a 121.5 MHz ELT and you crash in the sticks, don't expect help in a hurry unless your crash site is within range of a listening control tower. The follow-on technology is the 406 MHz system, with ELTs now becoming available.

How it works

When a 121.5 MHz beacon activates, it transmits a continuous swept tone until the battery is spent. Neglected batteries might shave that time in half. The more sophisticated 406 MHz digital pulse transmits at 50-second intervals for 24 hours and transmits pre-programmed, digitally encoded data such as aircraft tail number and beacon serial number, plus country of origin and aircraft serial number. Think of it as a personalized dispatch for low-earth orbit and geosynchronous orbit COSPAS-SARSAT satellite processing. A 406 MHz hit has an alert time of under five minutes with a single detection by a geosynchronous satellite. The waiting time for a LEO-satellite-based 121.5 MHz detection hit could be 45 minutes or more.

Limited market

Improved 406 MHz beacons have been available for a while, but the market is hardly hot. Despite advances, 406 MHz technology hasn't caught fire in light aircraft GA because of the higher cost. This is hardly a shocker. But the industry is buzzing about new low-cost 406 MHz models that are about to hit the market.

Artex Aircraft Supplies in Oregon, a key player in 121.5 MHz beacons, is also emerging as a leader in 406 MHz technology. The C406 series ELTs are third-generation systems that have been the only 406 MHz systems within price reach of most owners. We're not talking about a $200 beacon, but a couple of grand for the C406 with optional ELT/ NAV interface for copying latitude and longitude coordinates from an onboard GPS system. While this is precise position reporting, streaming the same 24-bit address protocol as a Mode-S transponder, owners of light aircraft just don't have this pricey technology in their budgets.

But with the 2009 121.5 MHz phase-out moving closer, Artex sees the need for affordable 406 MHz beacons with their new model ME-406 ELT system. The ME-406 is certified under TSO C126, which represents the new 406 MHz ELT spec. It's approved by COSPAS-SARSAT standard and is available now, for $998. The ME-406 is an automatic fixed-type beacon and weighs two pounds. It's aimed directly at common general aviation aircraft.

One thing we like about the ME-406 is that it still incorporates 121.5 MHz output through a single antenna. In our view, distress pulses on 121.5 MHz will remain an effective way to pinpoint wrecks through local rescue search team efforts. The 406 MHz frequency will simply get the search started more quickly and pointed in the right direction.

A "smart" ELT, the ME-406 is custom pre-programmed during manufacture using a short message format with specific user data: Serial number, aircraft tail number, 24-bit aircraft address and aircraft operator designator personalizes the beacon's output to the operator. The

ME-406 won't support location protocols—GPS but still, the ME-406 series sets a lower-price standard for a complete beacon package kit. Artex offers the ME-406 HM for helicopters. This model has five auxiliary G-switches for activating in six axes.

What it does

Automatic activation occurs when the crash sensor G-switch is triggered by a 4.5 feet-per-second deceleration. The ME-406 can also be activated with a cockpit-mounted remote switch or by throwing the switch on the ELT body. A standard swept tone is transmitted on 121.5 MHz and on 406 MHz, the programmed aircraft and beacon identification is transmitted for 24 hours, at 50-second intervals.

The ELT measures 6.6 by 3.7 by 2.9 inches and has a mounting hole configuration that should be compatible with most ELT housings. The ELT assembly is secured in a mounting tray and uses a 15-pin D-Sub connector to interface with the remote switch. The battery pack is two D-size lithium cells mounted in a case cover assembly. The batteries can easily be replaced in the field. Battery life is rated for five years or one hour of activation.

The ME-406 is microprocessor controlled with automatic self-testing and interactive visual and audible error codes. There's a LED status annunciator on the case of the ELT above the connector assembly. After examining one, we think the ME-406 has a high-quality feel and is about as exciting as an ELT gets.

Installation

There's no off position for the ME-406 beacon—some beacons with off switches can inadvertently be switched off during maintenance. Instead, a jumper is installed between contact pins during wiring, which, when energized, allows the G-switch to activate the beacon. Arming the beacon is as easy as sliding it into its mounting tray and connector. This is smart engineering, since it eliminates the chance of false activation during handling. Hang around any maintenance hangar for long enough and you'll likely witness a search effort for a bogus ELT activation.

A ME-406 system comes standard with a whip-style ELT antenna, rated for 200 knots IAS and for fixed wing reciprocating aircraft. The antenna is installed on top of the fuselage and the cable is connected to the ELT with a common BNC connector. As with most antennas, the ELT whip should be installed using a proper doubler or skin backing plate using proper grounding. Care should be taken to not place the antenna too close to tail sections, props or other antennas to avoid shadowing.

Larger and faster aircraft require beefier antennas offered by Artex and several aftermarket manufacturers. Hang a high-speed ELT stick on a pressurized vessel and you could be into thousands of dollars in engineering approvals. Some ELT antennas have proven somewhat playful. We recall a single-engine Piper that went through three ELT rod antennas in a year. The antenna lived in a stressful, twirling slipstream, which snapped the metal rod at the base of the antenna.

Drop in replacement

A drop in retrofit version of the ME-406 is the ME-406 ACE version, which Artex calls Absolute Cost Efficiency for reducing installation costs of a 406 MHz changeover. The ME-406ACE can be dropped into an existing ACK or Ameri-King ELT installation. If replacing an ACK ELT, the new Artex remote switch will replace the old one in form, fit and function, eliminating the need to modify the existing remote switch mounting scheme.

Replacing the Ameri-King remote switch requires minor modification of the mount. In either case, the remote switch doesn't rely on ship's power for operations but on the beacon's battery instead. Eliminating the need to remove the aircraft interior to route new control wiring is a mighty savings in labor time and money.

List price of the ME-406 ME is $1148, which is reasonable, in our view. We've tended to snub our noses at slide-in avionics that use existing old wiring, so be sure your shop gives the old installation a hard look. On average, an entirely new ELT install could cost $500 to $800, but more if antenna work is needed.

New models

Edmo Distributors told us that a surge of new 406 MHz beacons is expected to hit the market this year and several ELT manufacturers await TSO approval on new cost-effective 406 MHz models. From France-based Martec Beacons and Instrument Systems is the KANNAD 406 AF. They say they'll offer a new generation of 406 MHz units at a price that's slightly higher than that of conventional two-frequency ELTs. Martec's product literature focuses on turboprops, Boeing airliners and single-engine pistons, too. Pricing for the 406 AF promises to be about $1000.

Both ACK Technologies and Ameri-King are reported to be working on 406 MHz models approved for installation. Until then, the ACK E-01 and Ameri-King AK-450 121.5/243.0 MHz models are still available or can be easily, if not cheaply, replaced by the 406 MHz Artex ME-406 ACE.

Conclusion

We've received a number of queries from readers seeking advice on ELT upgrades. There's some confusion about legalities governing ELT use in aircraft. FAR 91.207 covers the requirement for on-board emergency locator transmitters and it's worth a read. There is no current law that says you must have a 406 MHz beacon.

If you don't have one after February 1, 2009, there's no doubt that rescue response will be slower, if it comes at all. Our advice is that if your aircraft needs a replacement ELT because the 121.5 MHz beacon has failed, bite the bullet and consider the Artex ME-406. We think it's a solid design and represents a good value in performance with the benefits of 406 MHz technology.

If your existing 121.5 MHz beacon is in good order, we think it makes more sense to wait for a few more market entrants later this year, at which point we'll do a follow-up review on 406 MHz models. Prices may become more competitive. But if you're paranoid that your airplane will leave you stranded in the backwoods, $1000 isn't much to spend for an upgrade to a new 406 MHz unit now. ■

Checklist

- ***406 MHz technology definitely improves ELT performance***
- ***Selection will increase in the coming year and prices may drop. Stay tuned.***
- ***Market is thin for now. Don't buy right away unless you must.***
- ***Even the best 121.5 MHz beacons will be old news in 2009.***

406 MHZ ACCURACY

Inaugurated in 1982, COSPAS-SARSAT is an international satellite-based search and rescue system with a proven record of saving thousands of lives by monitoring 121.5, 243.0 and 406 MHz emergency beacons. It's no surprise that digital 406 MHz is the emerging standard since the technology has proven more accurate, yielding quicker searches and fewer false alerts.

For instance, for the 121.5 MHz protocol, COSPAS-SARSAT reports that only one alert out of 50 represents a genuine distress situation. For 406 MHz alerting, one alert in 17 is real. A look at transmitter power and pinpoint accuracy specs reveals why: the position accuracy of a 0.1 Watt, 121.5 MHz frequency analog transmitter covers a broad 15 to 20 kilometer radius around the transmitter. The position accuracy of a 5-watt, 406 MHz pulse can be as tight as 3 kilometers or on average, less than 1 nautical mile.

Contact

Artex Aircraft Supplies

800-547-8901

www.artex.net

ACK Technologies Inc.

www.ackavonics.com

Ameri-King

www.ameri-king.com

800-235-3300 (Edmo)

Prevention through training, trip planning and ten essentials

By Jacqueline Bannach

What an opportune time to focus on prevention! Yearly events such as Emergency Preparedness Week (May 4-10, 2008) and North American Safe Boating Awareness Week (May 17-23, 2008), highlight individual responsibility and underscore the need to be well-prepared as an essential component of any prevention strategy.

The convergence of the "Three T's" – training, trip planning and ten essentials can mitigate the need for a search and rescue (SAR) response. Across land, marine and air environments, there is a concerted effort to change behaviour, mitigate risk and enable informed decision-making to reduce the severity and frequency of SAR incidents. Issuing weather warnings, conducting safety checks of aircraft and/or vessels, providing trip plans and educational programs, SAR prevention crosses a myriad of jurisdictions and activities.

Like road safety, SAR prevention is a key component in reducing the need for response capabilities. Twenty years ago, the idea of compelling automobile drivers and passengers to wear seat-belts was thought to be too prescriptive and many questioned the value. Similarly, drinking and driving was not as stigmatized as it is today.

British Columbia's AdventureSmart program is recognized as a best practice in SAR prevention, and plans are underway to expand the program nationally.

Photo Credit: *Cyndie Jones, BC PEP, AdventureSmart*

With a common vision of reducing fatalities and serious injuries with key interventions such as awareness, outreach and enforcement, behaviour and attitudes can change. Today, the improvement in road safety is clear:

- Seat-belt usage has saved more lives than any other road safety intervention.
- Seat-belts reduce fatal or serious injury by 40-65%.
- Child restraints reduce infant deaths by 71% and deaths in young children by 54%.[1]
- Fatally injured drivers whose blood alcohol exceeded legal limits in Canada dropped from 38% in 2001 to 29% in 2006.[2]

So what is on the horizon for SAR prevention? In the air, a national communication strategy to advise pilots and the aviation community of the impending change to emergency beacon alerting is progressing. As of February 1, 2009, satellites will no longer process 121.5 MHz transmissions and pilots and mariners are being encouraged to make the switch to 406 MHz.

On the water, North American Safe Boating Awareness Week covers five key messages: life jacket wear, the importance of boating sober, acquiring boating education, operator and vessel preparedness, and the risks associated with cold water immersion. In this domain, the Canadian Safe Boating Council is encouraging broad public awareness, and driving both a national outreach program undertaken directly by the Council and a strong, local outreach program with the help of volunteers Canada-wide. Last year, they created more than 43 million safe boating impressions and

their goal this year is to surpass it by 10%. In addition, boating safety can now rely on enforcement assistance in certain jurisdictions. In Ontario, where alcohol was a factor in 40% of boating fatalities in 2005[3], laws now make boating and drinking an offence.

On land, trip planning and preparedness go hand-in-hand. Whether you are a seasoned pro or a first-timer, knowledge, equipment and forethought may save your life. British Columbia's AdventureSmart program, sponsored by the British Columbia Provincial Emergency Program and the SAR New Initiatives Fund, is recognized as a best practice in SAR prevention, and plans are underway to expand the program nationally.

The AdventureSmart website provides awareness by compiling the Three T's for many activities into short, useful segments for the general public. AdventureSmart Teams and trained presenters deliver presentations across British Columbia to youth groups, within the school system, and at outdoor events, while incident analysis focuses their efforts in the right location and to the right audience.

The underlying message of prevention is that safety starts with the individual. Whether you're flying, boating or on land, be part of the solution by being prepared. ■

[1] © Copyright World Health Organization (WHO). 2008. All Rights Reserved.
[2] Canadian Motor Vehicle Traffic Collision Statistics: 2006. Transport Canada
[3] Hansard Transcripts. Official Records, Legislative Assembly of Ontario. 2005-12-01_L027.htm

Jacqueline Bannach is a Civilian Member of the RCMP. Her first exposure to search and rescue was as a young lieutenant, teaching aircrew survival to cadets at summer camp in Whitehorse, Yukon. In November 2007, Jacqui joined the National Search and Rescue Secretariat on secondment as a senior policy analyst, with a focus on revitalizing SAR prevention.

What are the ten essentials?

1. ***Flashlight, spare batteries and bulb***
2. ***Firemaking kit***
3. ***Signaling device – whistle or mirror to signal searchers if you become lost***
4. ***Extra food and water – 1 litre/person***
5. ***Extra clothing (rain, wind, water protection)***
6. ***Navigational/Communication Aids***
7. ***First Aid Kit***
8. ***Emergency shelter – orange tarp or large orange garbage bag***
9. ***Pocket knife***
10. ***Sun protection (glasses, sunscreen, hat)***

SEARCH AND RESCUE NEW INITIATIVES FUND

By Jae-Sang Park

In February, the National Search and Rescue Secretariat (NSS) and the Ministère de la Sécurité publique du Québec hosted representatives from Provincial/Territorial governments in Québec City, for the annual Search and Rescue New Initiatives Fund (SAR NIF) Provincial/Territorial Workshop.

Every year, the NSS seeks to improve the way that it administers the program by conducting a workshop with provincial/territorial recipients and potential applicants. The workshop provides an opportunity for recipient to have a further understanding of the processes related to the management of SAR NIF projects. The theme of this year's workshop was focused on the reporting elements of SAR NIF project management.

Approximately 30 participants attended the workshop and discussed best practices, shared ideas and exchanged information on how they managed and reported on their SAR NIF projects.

their goal this year is to surpass it by 10%. In addition, boating safety can now rely on enforcement assistance in certain jurisdictions. In Ontario, where alcohol was a factor in 40% of boating fatalities in 2005[3], laws now make boating and drinking an offence.

On land, trip planning and preparedness go hand-in-hand. Whether you are a seasoned pro or a first-timer, knowledge, equipment and forethought may save your life. British Columbia's AdventureSmart program, sponsored by the British Columbia Provincial Emergency Program and the SAR New Initiatives Fund, is recognized as a best practice in SAR prevention, and plans are underway to expand the program nationally.

The AdventureSmart website provides awareness by compiling the Three T's for many activities into short, useful segments for the general public. AdventureSmart Teams and trained presenters deliver presentations across British Columbia to youth groups, within the school system, and at outdoor events, while incident analysis focuses their efforts in the right location and to the right audience.

The underlying message of prevention is that safety starts with the individual. Whether you're flying, boating or on land, be part of the solution by being prepared. ■

What are the ten essentials?

1. *Flashlight, spare batteries and bulb*
2. *Firemaking kit*
3. *Signaling device – whistle or mirror to signal searchers if you become lost*
4. *Extra food and water – 1 litre/person*
5. *Extra clothing (rain, wind, water protection)*
6. *Navigational/Communication Aids*
7. *First Aid Kit*
8. *Emergency shelter – orange tarp or large orange garbage bag*
9. *Pocket knife*
10. *Sun protection (glasses, sunscreen, hat)*

[1] © Copyright World Health Organization (WHO), 2008. All Rights Reserved.
[2] Canadian Motor Vehicle Traffic Collision Statistics, 2006. Transport Canada
[3] Hansard Transcripts, Official Records, Legislative Assembly of Ontario, 2005-12-01_L027.htm

Jacqueline Bannach is a Civilian Member of the RCMP. Her first exposure to search and rescue was as a young lieutenant, teaching aircrew survival to cadets at summer camp in Whitehorse, Yukon. In November 2007, Jacqui joined the National Search and Rescue Secretariat on secondment as a senior policy analyst, with a focus on revitalizing SAR prevention.

SEARCH AND RESCUE NEW INITIATIVES FUND

SHARING BEST PRACTICES TO IMPROVE SAR NIF

By Jae-Sang Park

In February, the National Search and Rescue Secretariat (NSS) and the Ministère de la Sécurité publique du Québec hosted representatives from Provincial/Territorial governments in Québec City, for the annual Search and Rescue New Initiatives Fund (SAR NIF) Provincial/Territorial Workshop.

Every year, the NSS seeks to improve the way that it administers the program by conducting a workshop with provincial/territorial recipients and potential applicants. The workshop provides an opportunity for recipient to have a further understanding of the processes related to the management of SAR NIF projects. The theme of this year's workshop was focused on the reporting elements of SAR NIF project management.

Approximately 30 participants attended the workshop and discussed best practices, shared ideas and exchanged information on how they managed and reported on their SAR NIF projects.

Further, participants provided the NSS with valuable comments and suggestions for implementation. Comments and suggestions contribute to the continuing improvement of the SAR NIF and its ability to provide federal funding in an effective and efficient manner. ■

THIRTEEN NEW PROJECTS TO BE FUNDED

The National Search and Rescue Secretariat will be funding 13 new SAR NIF projects in 2008-2009. Projects cover a wide range of activities across marine, air and ground SAR environments with provincial and territorial projects mainly focused on providing SAR volunteers with equipment. Interoperability continues to be addressed in projects through the SAR NIF, which highlights the importance of coordinated SAR responses across Canada.

Projects include:

- The purchase of Small Pack Aerial Rescue Kit (SPARK) for CASARA and training for members.
- Strengthening interagency response through the development of multi-jurisdictional exercise groups in the Canadian Coast Guard's four key communities on the BC coast.
- Development of a system (CASTRACK) to track and account for all casualties involved in major marine incidents.
- Installation of the Weatheradio service to northern communities as well as 24/7 continuous broadcasting of weather information.
- Research into the hazards associated with ice and freezing fog in northern latitudes while improving detection through satellite instruments and statistical tools.
- Incorporating scatterometer measurements from operational satellites to improve ocean surface wind and ocean currents analyses and forecasts.
- Building a sustainable planning and management framework to advance ground SAR through the Ground SAR Council of Canada.
- Building a national framework by developing a public education and awareness strategy as well as a national training and exercise strategy for members of the SAR Volunteer Association of Canada.
- Enhancing the safety of volunteer SAR responders in BC through analysis, training and materials, while increasing capacity to track SAR volunteers in the field via automatic position reporting.
- Enhancing SAR in the province of Manitoba through multi-agency training exercises and ground SAR courses, as well as promoting interoperability through the acquisition of GPS technology.
- Improving the New Brunswick Ground SAR Program by developing policy and procedures to facilitate strong partnerships among all emergency service providers.
- Establishing nine regional helicopter high line rescue teams in the province of Newfoundland and Labrador.
- Equipping the Nova Scotia Ground SAR Association with GPS units while increasing public safety and awareness.

For the complete project list with summaries, visit the NSS website at www.nss.gc.ca ■

CALL FOR NEW PROPOSALS

The National Search and Rescue Secretariat (NSS) is accepting SAR NIF proposals for initiatives to start April 1st, 2009. The deadline for submitting applications through a recognized SAR NIF partner is August 29, 2008.

The SAR NIF can provide funding for up to three years for projects that enhance air, marine and ground search and rescue (SAR) activities in Canada, as well as prevention initiatives. The SAR NIF has an annual allocation of $8.1 million that is used to fund ongoing and new SAR projects.

SAR NIF projects must be supported by a federal SAR department or agency, or a provincial/territorial SAR authority. All SAR NIF proposals must reflect the priorities of the National SAR Program, as well as the SAR priorities of the partnering department/agency or province/territory.

The National SAR Program priorities for 2009-2010 are:

- Integrating data management with decision-making and management decisions
- Eliminating the barriers that prevent SAR partners from working together effectively
- Minimizing the number of SAR incidents through public education and awareness.

For further information, please consult the SAR NIF Applicant's Guide (2009/2010) available on the NSS website at www.nss.gc.ca.

For questions concerning SAR NIF applications, contact **Josée Marengère**, SAR NIF Manager at 1-800-727-9414 or jmarengere@nss.gc.ca.

Federal SAR departments or agencies and provincial/territorial SAR authorities must submit SAR NIF Applications by **August 29th, 2008** to:

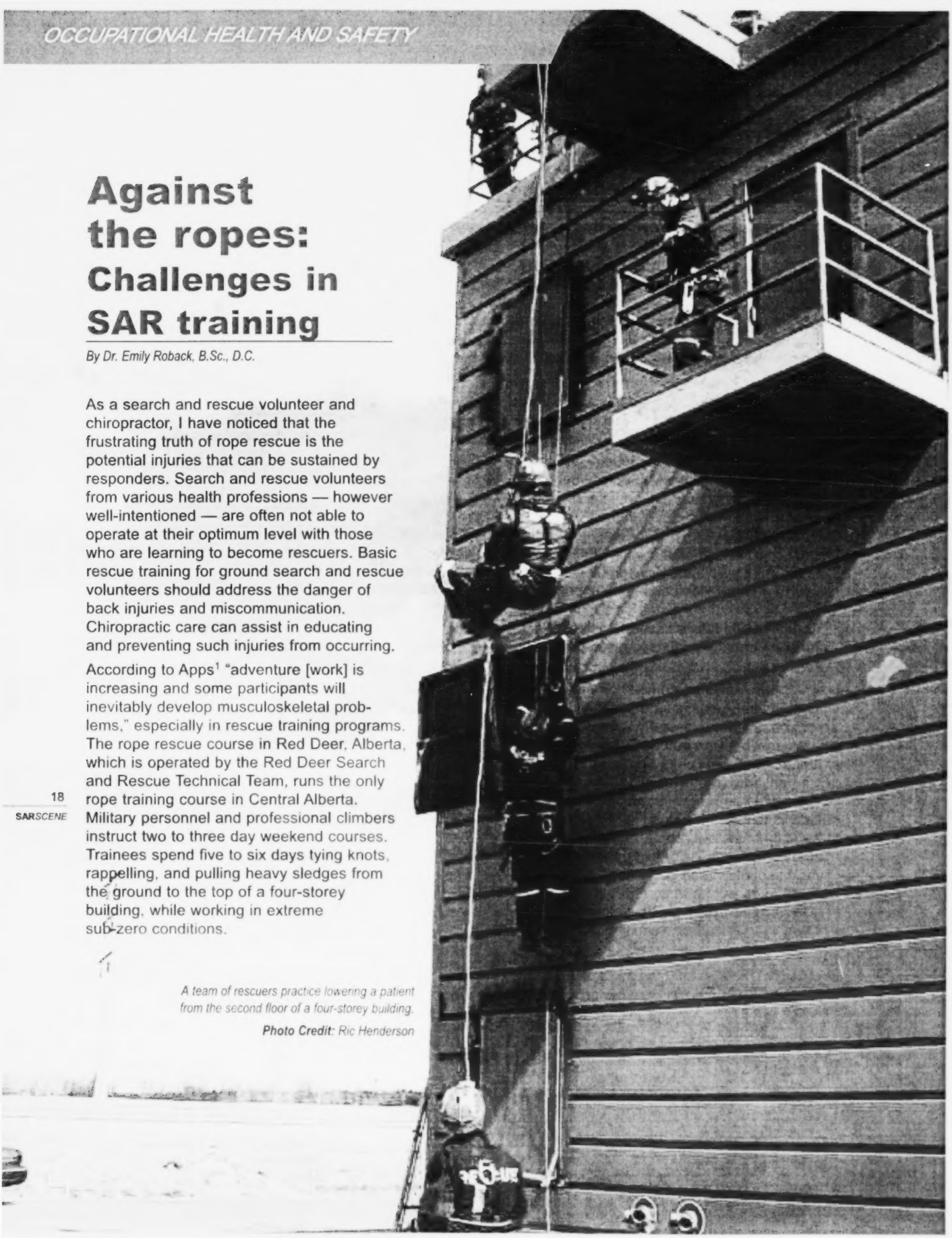
Josée Marengère
SAR NIF Manager
National SAR Secretariat
4th Floor, 275 Slater Street
Ottawa ON K1A 0K2 ■

Against the ropes: Challenges in SAR training

By Dr. Emily Roback, B.Sc., D.C.

As a search and rescue volunteer and chiropractor, I have noticed that the frustrating truth of rope rescue is the potential injuries that can be sustained by responders. Search and rescue volunteers from various health professions — however well-intentioned — are often not able to operate at their optimum level with those who are learning to become rescuers. Basic rescue training for ground search and rescue volunteers should address the danger of back injuries and miscommunication. Chiropractic care can assist in educating and preventing such injuries from occurring.

According to Apps[1] "adventure [work] is increasing and some participants will inevitably develop musculoskeletal problems," especially in rescue training programs. The rope rescue course in Red Deer, Alberta, which is operated by the Red Deer Search and Rescue Technical Team, runs the only rope training course in Central Alberta. Military personnel and professional climbers instruct two to three day weekend courses. Trainees spend five to six days tying knots, rappelling, and pulling heavy sledges from the ground to the top of a four-storey building, while working in extreme sub-zero conditions.



A team of rescuers practice lowering a patient from the second floor of a four-storey building.

Photo Credit: *Ric Henderson*

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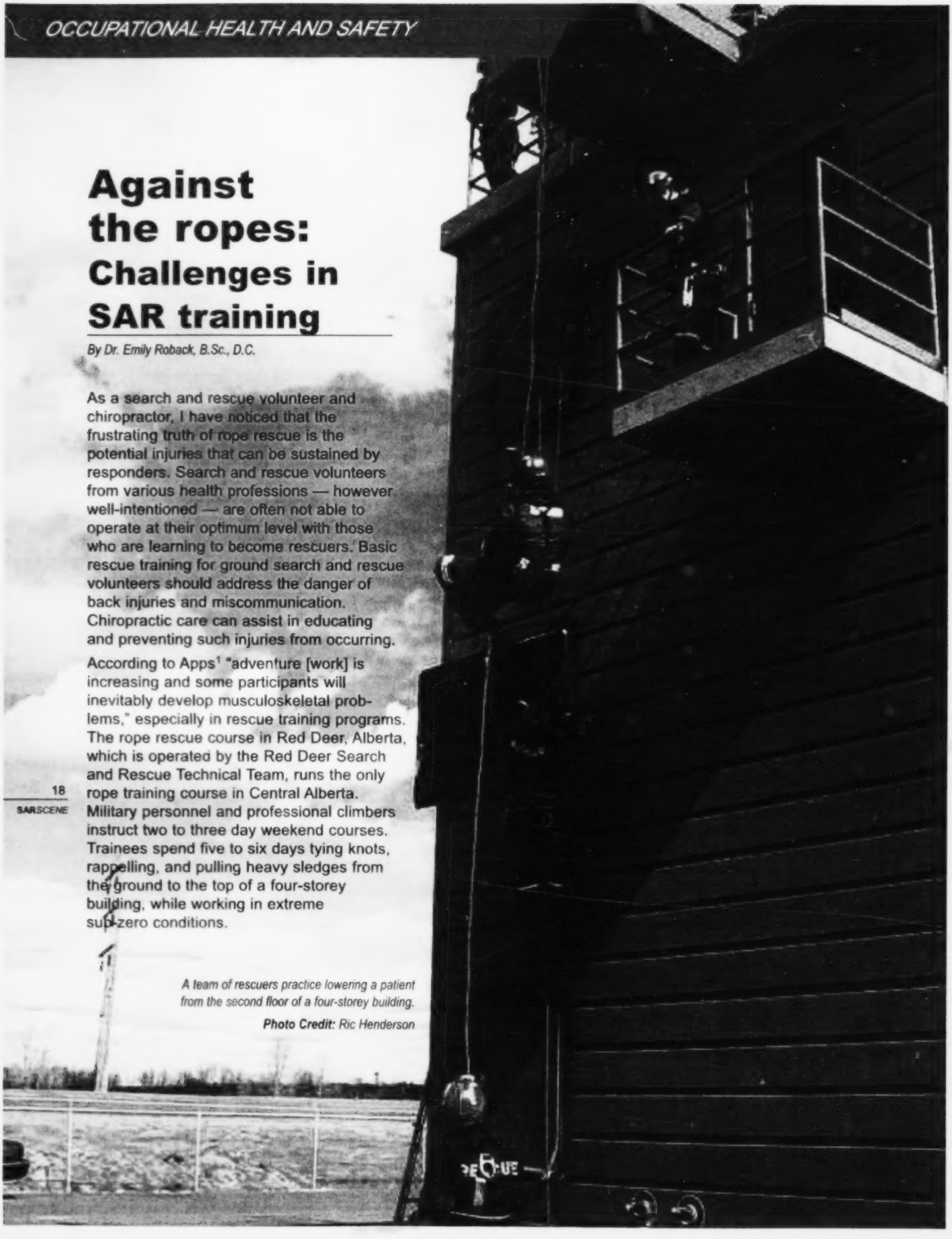

A team of rescuers practice lowering a patient from the second floor of a four-storey building.

Photo Credit: *Ric Henderson*

There are no minimum prerequisites for trainees who must be able to pull or lift the sledge from the ground level. The 'average' trainee is young and active – some have climbed the Rocky Mountains – self-sufficient, as well as having a wicked willpower to achieve success; having spent immeasurable amount of time mastering patient packaging, mechanical systems, hand signals, and tying rope knots correctly. To spare the back, trainees must learn to avoid lifting with the flexed low back. Lightly contracting the stabilizing abdominal musculature is strongly advised to reduce the risk of back injury[2]. Without proper lifting techniques, trainees more often than not injure their low back.

In addition to helping responders, chiropractic services can be competently provided in collaboration with, or as part of a structured rescue response team for casualties and structural collapses. Chiropractors that are search and rescue volunteers are most successful during the aftermath of a search provided they arrive on the scene as part of the prearranged response team. It is of great value for both responders and casualties to involve chiropractors that understand search and rescue.

Clinical cases of how valuable chiropractic can be in search and rescue are well documented. Two of these cases involved two search and rescue professionals who experienced acute pain as a result of their tasks on the team. One, a 37-year old male medical technician, had complained of acute lower back pain due to lifting a well-packed sledge off the ground. His chiropractic evaluation revealed a misalignment of the right and left sacro-iliac joints which are located the backside of the pelvis. After two visits of chiropractic care, his pain was resolved.

The second, a 42-year old male rescue technician, complained of reduced neck mobility, as well as numbness in his right forearm and hand. A pinched nerve in his shoulder and upper arm was identified due to being wrapped up too tight while lying down in a sledge. After three chiropractic treatments, his neck mobility returned to full range and the right arm numbness diminished. Today, he continues to use chiropractics for other physical ailments. As a result, the acute pain was followed up and successfully resolved through chiropractic intervention in both scenarios.

[1] *Apps, J. Polar Acupuncture in Medicine. 2002. 22(3): 156-158*
[2] *McGill, S. Low Back Disorders: Evidence-Based Prevention and Rehabilitation. Human Kinetics.2002 (textbook)*

It is clear that chiropractic is a valuable addition to the usual conservative medical approaches used in rescue training camps. As a recent graduate from the Canadian Memorial Chiropractic College, I believe chiropractic is an effective approach, in achieving a speedy recovery for back pain, without the use of anti-inflammatory medications. Other conditions such as headaches and neck pain can also be treated. Chiropractors can greatly help reduce first responders' risk of injury through education as well as treat injuries appropriately when they occur. ■

Dr. Emily Roback, president of Chiroback Trekker, provides chiropractic, sports therapy, and injury prevention seminars for search and rescue teams in Alberta. Dr. Roback can be contacted at roback@doctor.com and/or (403) 872–1599.

In the next edition of SAR*SCENE* Magazine, Dr. Roback will write about the importance of communications among search and rescue professionals and her experience as a ground search and rescue technician and volunteer living with a significant hearing loss.